

## **REMARKS**

Favorable reconsideration and allowance of this application are requested.

As a procedural note, the present amendment is being filed concurrently with a formal Request for Continued Examination (RCE) under 37 CFR §1.114. Accordingly withdrawal of the "finality" of the August 31, 2007 Official Action is in order so as to allow entry and consideration of the amendments and remarks presented herewith.

### **1. Discussion of Claim Amendments**

By way of the amendment instructions above, pending independent claim 1 has been amended so as to clarify that the second product comprising cyclohexanone oxime *and* cyclohexanone at a weight ratio of cyclohexanone oxime/cyclohexanone of greater than 0.3. Support for such amendment can be found in the originally filed specification at page 9, lines 7-11. (*"According to the invention a second product is obtained containing cyclohexanone and...cyclohexanone oxime. Preferably, the weight ratio of cyclohexanone oxime/cyclohexanone in the top product is...higher than 0.3...."*) Claim 13 has therefore been canceled as redundant.

Claim 25 has been amended so as to delete therefrom weight ratios of oxime/anone in the second product which is inconsistent with the expressions in the amended version of claim 1 and the embedded ratio of 0.5. The latter ratio now is recited in new claim 26.

Claim 27 is also new and recites the ratio of oxime/anone in the second product supported by the data in Table 1 on page 15 of the subject application. See also paragraph 11 of the accompanying Declaration Under Rule 132 of Dr. Hendrik Oevering ("the Oevering Declaration") to be discussed in greater detail below.

Therefore, following entry of this amendment, claims 1, 3-12, and 14-27 will remain pending herein for consideration.

## **2. Response to 35 USC §103(a) Rejection**

The Examiner has persisted in her rejection of prior claims 1 and 3-25 under 35 USC §103(a) over Rulkens et al in view of Stamicarbon '750 (British Patent 1,138,750). In this regard, the Examiner essentially takes the position that one of ordinary skill in this art would obviously recognize the utility of recycling unreacted cyclohexanone of the Rulkens et al process in the Stamicarbon '750 process. Applicants suggest however that such a position oversimplifies the present art.

In this regard, the Examiner's attention is directed to the Oevering Declaration being presented pursuant to Rule 132. As noted by Dr. Oevering (clearly one possessing greater than ordinary skill in this art), cyclohexanone oxime is known to be a compound which is sensitive to thermal decomposition. Such a fact can, for example, be seen from the description at column 1, lines 4-10 of EP 0 550 965 in the name of Sumitomo Chemical Company, Limited,<sup>1</sup> which reads:

*"Thermal decomposition of cycloalkanone oximes occurs when they are used at high temperatures, for example, when they are vaporized for use. Not only this thermal decomposition causes loss of cycloalkanone oximes, but also the decomposition products are sometimes harmful for the subsequent operations..."*

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<sup>1</sup> A copy of the EP '965 publication is attached and is noted on the accompanying Information Disclosure Form for the Examiner's convenience to indicate consideration by initials.

Clearly such thermal decomposition will also occur during distillation, as is the case in the distillative separation steps, especially the second distillation, as are used in the process of Rulkens et al. '291 where ***no recycling of the top product is considered or suggested.***

Thus, the skilled person will not consider the recycling of the top product of the second distillation (as is done according to the claimed invention of the present application) because such a person would believe that this would be very unfavorable for the process as a whole, i.e., the cyclohexanone oxime being recycled in such way through the oximation zone and first and second distillation steps, would be exposed more heavily to conditions where thermal decomposition is expected to occur, which then would be expected to result in undesirable higher production losses.

Combination of the teachings of Rulkens et al. '291 (where a second distillation step is employed, ***without recycling of cyclohexanone oxime***) with the teachings of Stamicarbon '750 (where only one distillation step is employed, and ***only solvent is recycled*** to the oximation step), therefore cannot be deemed to be obvious under 35 USC §103(a).

The unobviousness of the claimed invention of the subject application is even more clearly evident by the fact that the top stream from the second distillation, as it is employed for recycling in the process for the claimed invention of the subject application, comprises both cyclohexanone oxime and cyclohexanone, notably at a ratio which is much higher than the ratio between cyclohexanone oxime and cyclohexanone as can be seen in Example I of Rulkens et al '291.

In this regard, the composition of the second distillation top product of Example 1 in Rulkens et al '291 is:

- a. cyclohexanone (wt.%) = 6.1
- b. cyclohexanone oxime (wt%) = 1.7

c      toluene (wt%) = 92.2

Thus, the ratio oxime:anone in Example 1 of Rulkens et al '291 is about 0.28.

According to the invention of the subject application, (see the Table at page 15 therein), the composition of the second distillation top product is:

Anone conc.(wt%)	5.3	5.3	4.8	4.7	5.9	6.8
Oxime conc. (wt%)	22.8	22.6	19.3	17.8	16.6	15.4
Toluene conc. (wt%)	71.9	72.1	75.9	77.5	77.5	77.8

Therefore, the ratio oxime:anone is about 2.3 to 4.3, which is clearly higher than the ratio oxime:anone in Rulkens et al '291.

Withdrawal of the rejection advanced in the Official Action dated August 31, 2007 under 35 USC §103(a) based on the combination of Rulkens et al '291 and Stamicarbon '750 is therefore in order.

### 3. Conclusion

Every effort has been made to advance prosecution of this application to allowance. Therefore, in view of the amendments and remarks above, applicant suggests that all claims are in condition for allowance and Official Notice of the same is solicited.

Should any small matters remain outstanding, the Examiner is encouraged to telephone the Applicants' undersigned attorney so that the same may be resolved without the need for an additional written action and reply.

An early and favorable reply on the merits is awaited.

**4. Fee Authorization**

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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